

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (cancelled).

2 (previously presented). A cover according to claim 12, wherein said filter is compressible.

3 (previously presented). A cover according to claim 2, wherein said filter is made of a fiber material selected from the group comprising felts of vitreous synthetic fibers.

4 (previously presented). A cover according to claim 12, wherein the top of said wall and the bottom face of said filter are substantially plane.

5 (previously presented). A cover according to claim 12, comprising a continuous peripheral rim bordering said filter bottom face inside said filter opening and projecting downwardly relative thereto, said rim having outside dimensions that are smaller than corresponding inside dimensions of said opening into said chamber for being received therein.

6 (previously presented). A cover according to claim 5, wherein the filter has inside dimensions that are greater than corresponding ones of said outside dimensions so as to leave annular clearance between said rim and said filter.

7 (currently amended). A cover for inhibiting the escape of particles produced by a thermite reaction within a chamber of a

crucible having a closed bottom and a circumferential wall that extends upwardly from said bottom, the top of said wall surrounding an opening into said chamber,

said cover comprising

a filter having a central opening, an inner face, a top face, a bottom face, and an outer face, and said filter bottom face being seatable atop said crucible wall with said filter opening in registration with said opening into said chamber, and

a lid having a downward facing circumferential flange mountable on said top face of said filter for sealing said chamber to inhibit the escape of particles produced by said thermite reaction while leaving said inner face and outer face of said filter unobstructed for permitting gases produced by said thermite reaction to exit said crucible at the top of said chamber by entering said filter through said inner face, and exiting said filter to the ambient environment through said outer face.

a continuous peripheral rim bordering said filter bottom face inside said filter opening and projecting downwardly relative thereto, said rim having outside dimensions that are smaller than corresponding inside dimensions of said opening into said chamber for being received therein, said filter having inside dimensions that are greater than corresponding ones of said outside dimensions so as to leave annular clearance between said rim and said filter,  
and

~~A cover according to claim 6, comprising localized centering means for centering the filter relative to said rim so as to ensure that said annular clearance exists.~~

8 (currently amended). A cover for inhibiting the escape of particles produced by a thermite reaction within a chamber of a crucible having a closed bottom and a circumferential wall that extends upwardly from said bottom, the top of said wall surrounding an opening into said chamber,

said cover comprising

a filter having a central opening, an inner face, a top face, a bottom face, and an outer face, and said filter bottom face being seatable atop said crucible wall with said filter opening in registration with said opening into said chamber, and

a lid having a downward facing circumferential flange mountable on said top face of said filter for sealing said chamber to inhibit the escape of particles produced by said thermite reaction while leaving said inner face and outer face of said filter unobstructed for permitting gases produced by said thermite reaction to exit said crucible at the top of said chamber by entering said filter through said inner face, and exiting said filter to the ambient environment through said outer face;

~~A cover according to claim 6, comprising a continuous peripheral rim bordering said filter bottom face inside said filter opening and projecting downwardly relative thereto, said rim having outside dimensions that are smaller than corresponding inside~~

dimensions of said opening into said chamber for being received therein;

the filter having inside dimensions that are greater than said outside dimensions so as to leave annular clearance between said rim and said filter;

said downward facing circumferential flange having blind cavities that are circumferentially distributed, so that contact between said downward facing circumferential flange and said filter is locally interrupted, and said cavities communicate with said annular clearance, but are closed at the periphery of said downward facing circumferential flange by the downward facing circumferential flange of the cover making contact with the top face of the filter.

9 (previously presented). A cover according to claim 12, generally in the shape of a pot, defining internally a cavity set back upwards relative to said downward facing circumferential flange.

10 (previously presented). A cover according to claim 12, generally in the form of a body of revolution.

11 (previously presented). A cover according to claim 12, adapted for single use, said cover having a lid made of a material comprising sand agglomerated by a binder, said material being easily destroyed after use.

12 (currently amended). A cover for inhibiting the escape of particles produced by a thermite reaction within a chamber of a

crucible having a closed bottom and a circumferential wall that extends upwardly from said bottom, the top of said wall surrounding an opening into said chamber,

    said cover comprising

    a filter having a central opening, an inner face, a top face, a bottom face, and an outer face, and said filter bottom face being seatable atop said crucible wall with said filter opening in registration with said opening into said chamber, said filter passing gases but substantially blocking solid particles developed in said thermite reaction, and

    a lid having a downward facing circumferential flange mountable on said top face of said filter for sealing said chamber to inhibit the escape of particles produced by said thermite reaction while leaving said inner face and outer face of said filter unobstructed for permitting gases produced by said thermite reaction to exit said crucible at the top of said chamber by entering said filter through said inner face, and exiting said filter to the ambient environment through said outer face.

13 (previously presented). A cover according to claim 12 wherein said lid is free of openings other than pores between agglomerated particles from which said lid may optionally be formed.

14 (cancelled).

15 (currently amended). A vessel having a chamber for containing a thermite reaction, said vessel comprising

a crucible having a closed bottom and a circumferential wall extending upwardly from said bottom, said wall having a top with an upwardly facing flange,

a filter having a central opening, an inner face, a top face, a bottom face, and an outer face, and said filter bottom face being seatable on said flange of said crucible wall in registration therewith so that said filter and said wall surround said chamber, said filter passing gases but substantially blocking solid particles developed in said thermite reaction, and

a cover having a downward facing circumferential flange mountable on said top face of said filter for covering said chamber to inhibit the escape of particles produced by said thermite reaction while leaving said inner face and outer face of said filter unobstructed for permitting gases produced by said thermite reaction to exit said vessel at the top of said chamber by entering said filter through said inner face, and exiting said filter to the ambient environment through said outer face.

16 (new). A cover for inhibiting the escape of particles produced by a thermite reaction within a chamber of a crucible having a closed bottom and a circumferential wall that extends upwardly from said bottom, the top of said wall surrounding an opening into said chamber,

said cover comprising

a filter having a central opening, an inner face, a top face, a bottom face, and an outer face, and said filter bottom face being

seatable atop said crucible wall with said filter opening in registration with said opening into said chamber, and

a lid having a downward facing circumferential flange mountable on said top face of said filter for sealing said chamber to inhibit the escape of particles produced by said thermite reaction while leaving said inner face and outer face of said filter unobstructed for permitting gases produced by said thermite reaction to exit said crucible at the top of said chamber by entering said filter through said inner face, and exiting said filter to the ambient environment through said outer face,

said filter being fixed to one of said lid and said crucible and separable from the other of said lid and said crucible upon lifting of said lid away from said crucible for opening said chamber, said lid having sufficient weight to be able, solely under the force of gravity, to prevent dislodgement of said cover by gas pressure from said thermite reaction.